Claims

1. A compound comprising at least a structural entity which binds or inhibits secretory phospholipase A2 IIA (sPLA2 IIA) or parts of it and more specifically human sPLA2 IIA and which

   a.) blocks and/or neutralizes at least one or more sPLA2 IIA function and more preferably human sPLA2 IIA functions on cell surfaces or in a solution, preferably blood or other body fluids or from tissues, most preferably in vivo,

   b.) and/or depletes sPLA2 IIA and more preferably human sPLA2 IIA from a solution, preferably blood or other body fluids or from tissues, most preferably in vivo.

2. The compound according to claim 1, which is a polypeptide comprising a binding site to sPLA2 IIA, preferably an antibody containing an antigen-binding site to sPLA2 IIA.

3. The compound according to claim 1 and 2, which is a monoclonal antibody containing an antigen-binding site to sPLA2 IIA.

4. The compound according to claim 1 and 2, which is a monoclonal antibody containing an antigen-binding site to sPLA2 IIA and which has been produced after immunizing vertebrates, most preferably mice, rats, guinea pigs, hamsters, monkeys, pigs, goats, chicken, cows, horses and rabbits.

5. The compound according to claim 1 and 2, which is a monoclonal antibody containing an antigen-binding site to sPLA2 IIA and which is obtainable by immunizing transgenic vertebrates, most preferably mice, rats, guinea pigs, hamsters, monkeys, pigs, goats, chicken, cows, horses and rabbits.

6. The compound according to claim 1 and 2, which is a monoclonal antibody containing an antigen-binding site to sPLA2 IIA and which has been produced after immunizing humanized (with a humanized immune system) vertebrates, most preferably mice, rats, guinea pigs, hamsters, monkeys, pigs, goats, chicken, cows, horses and rabbits.

7. The compound according to claim 1 and 2, which is a monoclonal antibody containing an antigen-binding site to sPLA2 IIA and which has been produced by immunizing immune defective mice (as e.g. SCID or nude mice) repopulated with vital immune cells (e.g. of human origin; as e.g. SCID-hu mice).

8. The antibody according to claim 2, which is a recombinant antibody (as e.g. single chain antibody - scAb or scFv; bispecific antibody, diabody etc.) capable of binding to sPLA2 IIA, in particular by containing the antigen-binding site of an antibody which is cross-reactive with sPLA2 IIA.

9. The antibody according to claim 2 to 8, which is a humanized or human antibody.

10. A host cell producing the compound according to any one of the claims 1-9.

11. A recombinant vector comprising the nucleotide sequences encoding the binding molecule fragments according to any one of claims 1-9, operably linked to regulating sequences capable of expressing the antibody molecule in a host cell, preferably as a secretory protein.

12. A host comprising the vector according to claim 11.

13. A prokaryotic or eukaryotic cell line producing the recombinant antibody according to claim 1-9 and 11.

14. An eukaryotic organism, except man, producing a recombinant antibody according to claim 1-9 and 11.

15. A method of producing a recombinant molecule according to claim 1-9 capable of binding to the sPLA2 IIA antigen, comprising the step of culturing a host cell and isolating the binding molecule from the culture medium and/or the producing cell.

16. Use of a compound of claim 1 to 9 for the manufacturing of a medicament for inhibiting immunologic, inflammatory and/or pathophysiological responses in patients with increased IL-6, CRP and/or increased sPLA2 levels.

17. A pharmaceutical composition for reducing the sPLA2 IIA concentration and/or blocking, neutralizing sPLA2 IIA, containing a therapeutically effective amount of the binding molecule according to any one of claims 1-9 and a pharmaceutically acceptable carrier.

18. Use of a compound of claim 1 to 9 for the manufacturing of a medicament for reducing inflammatory immune and/or pathophysiological responses by reducing the sPLA2 IIA concentration and/or neutralizing sPLA2 IIA, the method comprising administering to a patient in need of such treatment a therapeutically effective amount of a pharmaceutical composition according to claim 17.

19. Use of a compound of claim 1 to 9 for the manufacturing of a medicament for reducing cell and/or endothel injury and/or destruction by reducing the sPLA2 IIA concentration and/or neutralizing sPLA2 IIA, the method comprising administering to a patient in need of such

treatment a therapeutically effective amount of a pharmaceutical composition according to claim 17.

20. Use of a compound of claim 1 to 9 for the manufacturing of a medicament for acute treatments in case of acute endothelial injury and/or destruction, preferably for stroke, cardiac infarction, avoidance of sudden cardiac death, for burnt offering, for severe surgery or other injuries with severe wound areas, for diabetic shock, for acute liver failure, for pancreatitis, neurodegenerative diseases, for leukemic persons after irradiation the method comprising administering to a patient in need of such treatment a therapeutically effective amount of a pharmaceutical composition according to claim 17.

21. Use of a compound of claim 1 to 9 for the manufacturing of a medicament for continuous treatments in case of long term endothelial injury and/or destruction, preferably for patients with medium CRP-amounts, with atherosclerosis, with unstable angina, with diabetes type I or type II, with overweigt and/or obesity, for alcoholics, under Hormone Replacement Therapy (HRT), for old persons, for smokers, the method comprising administering to a patient in need of such treatment a therapeutically effective amount of a pharmaceutical composition according to claim 17.

22. Use of a compound of claim 1 to 9 for the manufacturing of a medicament for preventing allograft transplant rejection or xeno-transplant rejection, the method comprising administering to a patient in need of such treatment a therapeutically effective amount of a pharmaceutical composition according to claim 17.

23. Use of a compound of claim 1 to 9 for the manufacturing of a medicament for the induction of allo-transplant or xeno-transplant tolerance or inhibition of T cell activation, the method comprising

administering to a patient in need of such treatment a therapeutically effective amount of a pharmaceutical composition according to claim 17.

24. Use of a compound of claim 1 to 9 for the manufacturing of a medicament for preventing or treatment of autoimmune diseases e.g. SLE, osteo arthritis, rheumatoid arhritis, multiple sclerosis, myasthenia gravis, Graves' disease, psoriasis vulgaris, dilated cardiomyopathy, diabetes mellitus, Bechterew, inflammatory bile disease, ulcerative colitis, Crohn's disease, idiopathic thrombocytopenia purpura (ITP), aplastic anemia, idiopathic dilated cardiomyopathy (IDM), autoimmune thyroiditis, Goodpastures' disease, arterial and venous chronic inflammation, the method comprising administering to a patient in need of such treatment a therapeutically effective amount of a pharmaceutical composition according to claim 17.

25. Use of a compound of claim 1 to 9 for the manufacturing of a medicament for treatment of HIV-infected patients, the method comprising administering to a patient in need of such treatment a therapeutically effective amount of a pharmaceutical composition according to claim 17.

26. A medicament comprising at least one composition of matter according to any one of the claims 1 to 14 and 17 for use in at least one method according to one of the claims 16, 18 to 25, comprising additionally therapeutics for the respective disease or other anti-inflammatory substances like e.g. anti-IL-6-molecules, anti-IL-1ß-molecules, anti CRP-molecules and/or complement blockers.